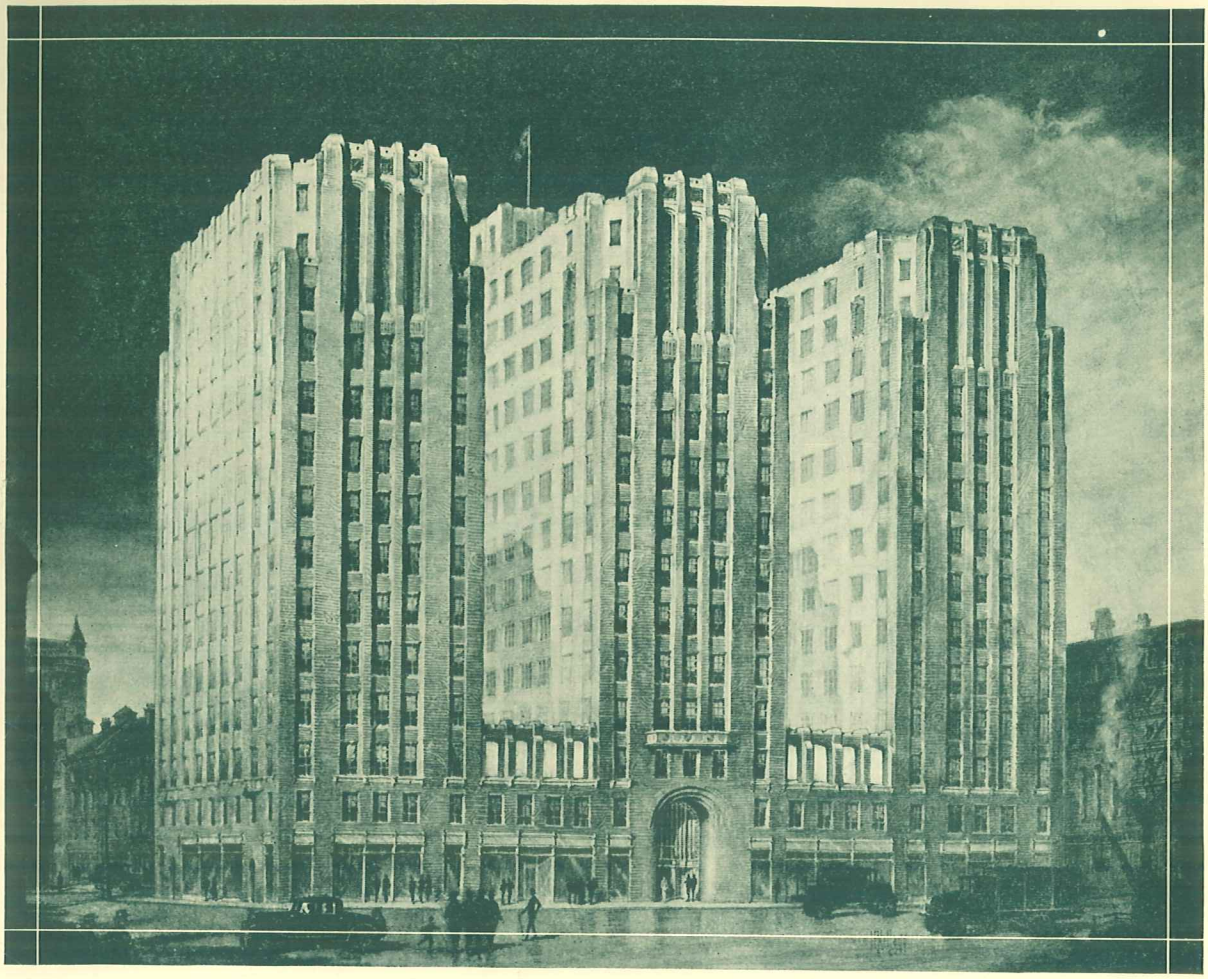


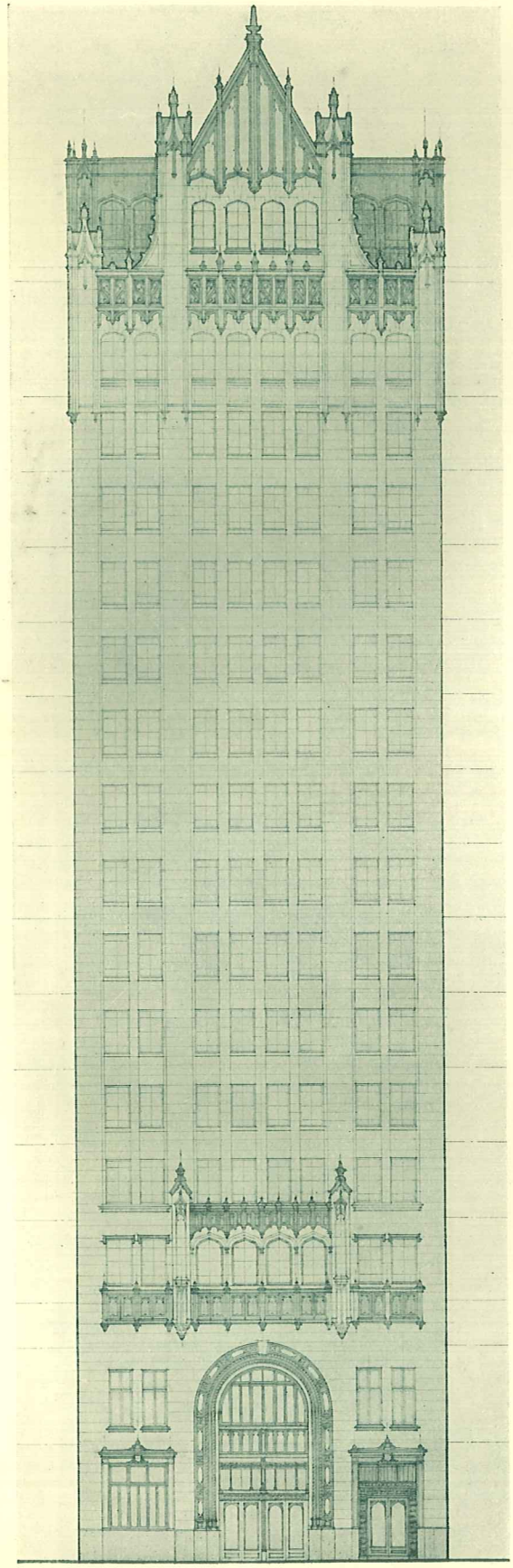
Architect, Harold Field Kellogg *Contractors, Turner Construction Co.*

Architect's sketch of the Batterymarch Office Building, second largest office building in Boston, Mass., containing over two thousand Fenestra Office Windows

Fenestra Office Windows

DETROIT STEEL PRODUCTS CO., 2250 E. GRAND BOULEVARD, DETROIT

A.I.A.—File No. 16e1



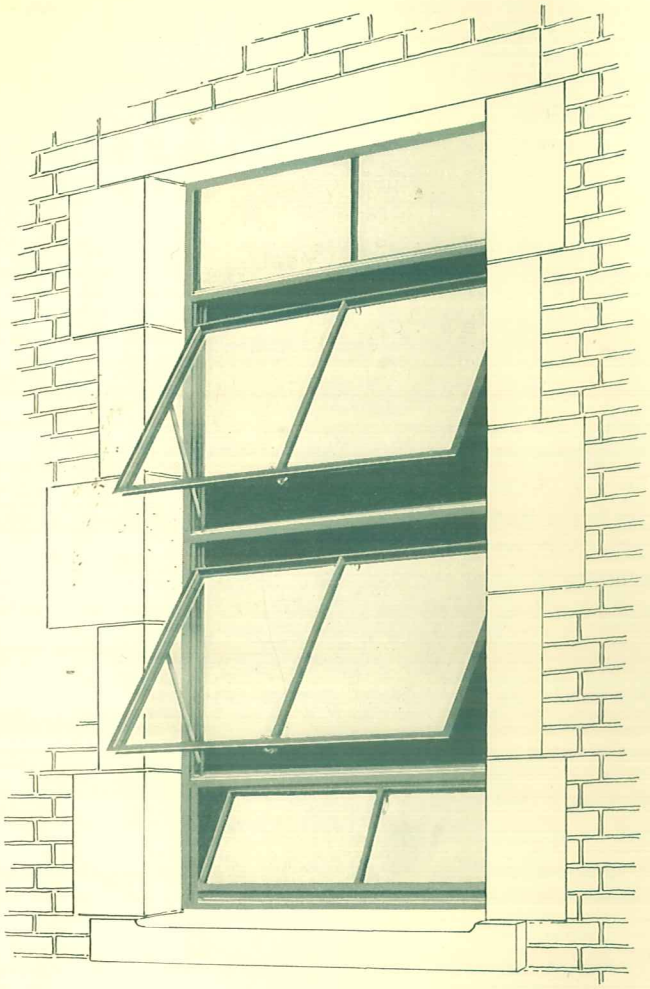
THE pencil sketches on this page and on the inside back cover show typical elevations and details, as worked out by our Architectural Service Department from plans drawn by the architects.

It is the object of this architectural service to give a visual presentation of just how Fenestra Office Windows may be made to harmonize with various types of monumental buildings and just how our product may be detailed into any type of construction.

Where necessary this work may be done in the architect's own office, though we much prefer to handle it in our own department at Detroit.

Fenestra

OFFICE WINDOWS



TWELVE MAJOR ADVANTAGES

Construction

One: Made of solid, rolled steel sections of Casement type. Their ruggedness not only insures durability but creates a conviction of permanence.

Two: Sections designed in a manner pleasing because of their simplicity, continuity and restraint.

Three: Internal, double baffle designed to secure a generous overlap and effective weathering contact equal to the best Casement types.

Four: Glazed on the outside, producing a Casement finish inside, without the necessity of glazing beads.

Sliding-Projecting Principle

Five: The sliding-projecting movement of the ventilators insures uniform ease of operation with vent stopped at any given angle of opening.

Six: Provides a satisfactory means of cleaning all glass from inside the building.

Seven: Supplies ventilation while protecting the interior from weather even when windows are open. Open-in ventilators make the use of separate windshields unnecessary.

Erection

Eight: Lends itself to trouble-free installation in accordance with the best building practice.

Hardware

Nine: All hardware in keeping with the window design, substantial, simple and attractive.

Shading

Ten: Easily and effectively shaded.

Screening

Eleven: Screening can be arranged for on individual jobs when desired.

Price

Twelve: Priced for economy to the ultimate consumer.

ARCHITECTURAL DESIGNING SERVICE

TO ASSIST in the proper designing of Fenestra Office Windows for architectural structures, we maintain an Architectural Service Department composed of architects with special training in the correct use of Fenestra in all types of monumental buildings. A word to your local Fenestra representative will place this department at your disposal without charge or obligation, with either direct personal service in your own drafting room or through intelligent co-operation from headquarters in Detroit.

Erection Service

The Fenestra Construction Company, a subsidiary of the Detroit Steel Products Company, offers builders the service of an organization especially equipped and trained for the erection and field painting of Fenestra Office Windows. *Under separate contract*, this company will assume complete responsibility for the delivery, handling, erection and painting of Fenestra Office Windows and will guarantee satisfaction from the time the material leaves the factory until it is installed in the building. Twelve erection supervisors and twenty-seven experienced field superintendents are constantly employed in this work all over the United States.

Dimensions

In all Fenestra Office Windows, the window dimension is always equal to the clear opening—in other words, that part of the window frame which is imbedded in the wall is not considered in the window dimension.

Installation

All window openings should be so designed that Fenestra Office Windows may be installed after the walls are up. This is the most economical, as well as the most practical method of erection and obviates many difficulties frequently encountered when an attempt is made to set the windows as the building progresses.

(GA) FENESTRA OFFICE WINDOWS—Specifications

Notes are explanatory only and need not be included in specifications

(GA-1) Work Included

NOTE: List and Locate.

(GA-2) General

All windows shall be Fenestra Office Windows as manufactured by *Detroit Steel Products Company.*

(GA-3) Materials

(GA-3a) *Window Sections*—All sections shall be special designed, hot rolled, solid steel bars with heavy fillets in re-entrant angles, designed for exterior glazing.

(GA-3b) *Frame Members*—Jamb and head members shall be 1½″ unequal leg, sections (outside leg 1⅜″, inside leg ¾″) designed for ⅝″ anchorage. Sills and horizontal intermediate bars shall be Zs with offset baffles.

(GA-3c) *Ventilator Members*—Ventilator stiles and rails shall be 1¼″ x 1⅜″ Z or T bars, with baffles.

(GA-3d) *Jamb Weathering*—Weathering at jambs shall be 1⅜″ offset unequal leg channels forming beveled interior sliding shoe grooves.

(GA-3e) *Muntins*—Muntins shall be 1¼″ x ⅞″ Ts.

(GA-3f) *Vertical Mullions*—Vertical Mullions shall be interior and exterior plates secured with bolts and nuts.

NOTE: Other designs of mullions may be used. If desired, provision for them should be made in the ornamental iron or structural steel specifications.

(GA-3g) *Horizontal Mullions*—Horizontal Mullions shall be standard Fenestra (Type 1—Z and angle) (Type 2—angle and channel with interior pressed steel mullion cover).

NOTE: Other designs of mullions may be used. If desired, provisions for them should be made in the ornamental iron or structural steel specifications.

(GA-4) Construction

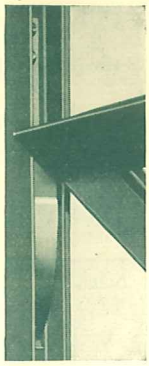
(GA-4a) *Frames*—Frames, including intermediate bars, shall be mortise and tenon, and electrically welded at corners. All exposed faces at welds shall be ground to a smooth finish.

(GA-4b) *Ventilators*—All stiles and rails of ventilators shall be mitered at corners and electrically butt welded with all exposed faces at welds ground smooth.

(GA-4c) *Muntins*—Joints at frame and ventilator members shall be closely fitted mortise and tenon, air hammer riveted.

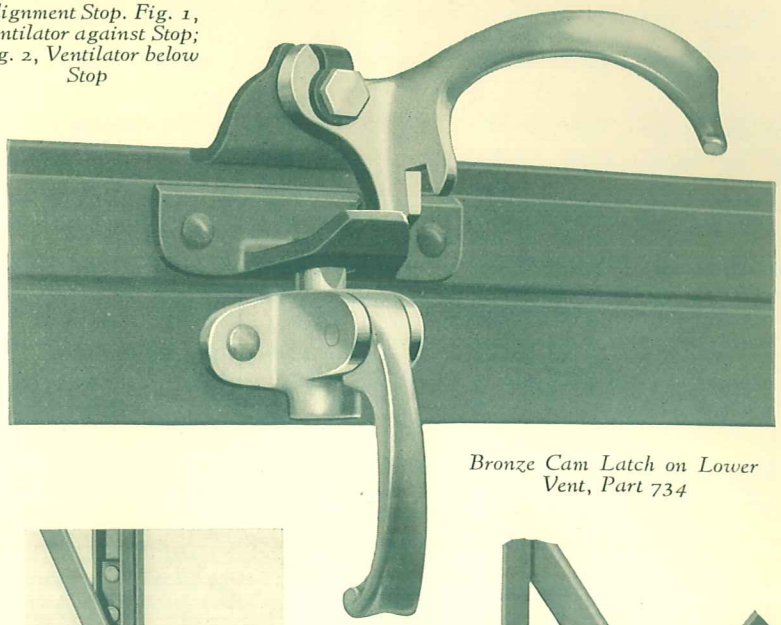
(GA-4d) *Vertical Mullions*—Where two or more windows are placed side by side in the same opening, provide vertical mullions.

(GA-4e) *Sill and Jamb Anchor Clips*—Furnish steel (sill) (jamb) anchor clips with bolts to attach to frames where required.



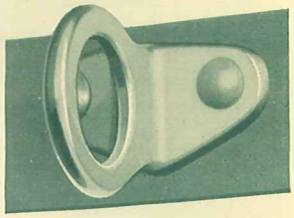
Alignment Stop. Fig. 1, Ventilator against Stop; Fig. 2, Ventilator below Stop

Fig. 1



Bronze Cam Latch on Lower Vent, Part 734

Bronze Cam Handle on Upper Vent, Part 733



Bronze Pole Ring, Part 151

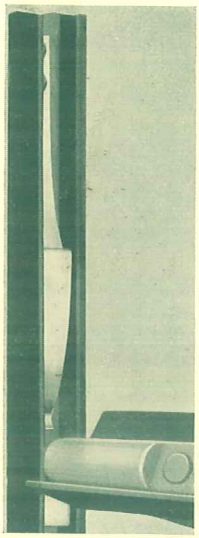
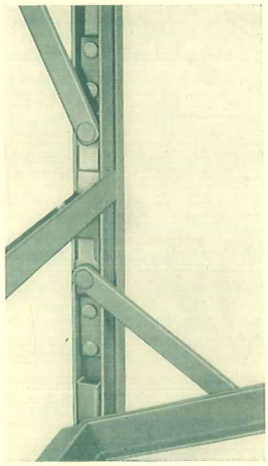
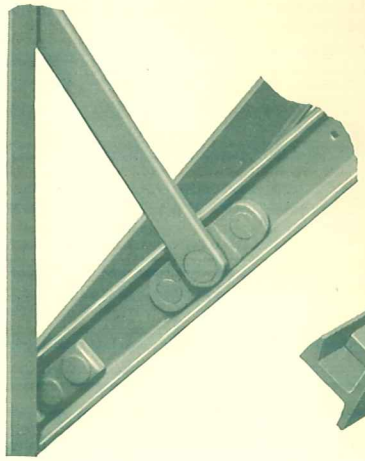
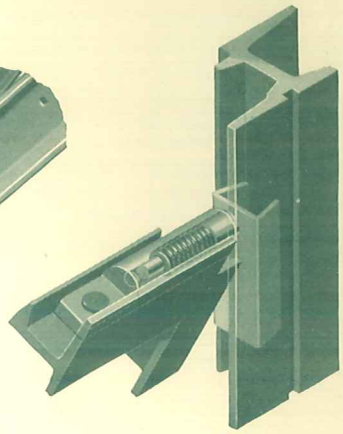


Fig. 2



Arm Attachment (left) to Frame, and (right) to Ventilator. Bronze Shoulder pivots and double riveted malleable iron brackets





Phantom view of Brass Sliding Friction Shoe

(GA-5) Attached Hardware

NOTE: Attached at factory.

(GA-5a) *Ventilator Operating Hardware*—Ventilators shall (swing-out from the bottom while sliding down from the top) (or) (swing-in from the top while sliding up from the bottom) as indicated. The ventilators shall be so constructed that by tilting they may be conveniently washed from inside the building.

NOTE: Specify swing-out, swing-in or both as required.

Each ventilator shall be balanced on two supporting arms of solid spring steel. Connections between supporting arms and window frame and between supporting arms and ventilators shall be made by malleable iron brackets rigidly supported and double riveted to the vertical members, with arms attached to brackets by bronze shoulder pivots.

Each ventilator shall be equipped with two brass friction shoes sliding vertically in the weathering channels.

(GA-5b) *Alignment Springs*—Each open-out ventilator shall be equipped with two shouldered, alignment-control bronze springs riveted to the channel jambs.

NOTE: The shoulders of these springs are so designed and located as to limit the downward travel of the friction shoes and stop all open ventilators in uniform alignment of approximately 60 degrees. When it is desired to open the ventilator at a greater angle for washing, light pressure on the springs depresses the shoulders and allows the friction shoes to slide past. As the ventilator is returned to a closed position, the action of the spring is automatic.

NOTE: Include if ventilators are more than 20" high.

(GA-5c) *Cam Handle Brackets*—On open-out ventilators provide special design solid brackets, rolled Z-bar, rigidly riveted to ventilator bottom rails for attachment of cam handles.

(GA-6) Detached Hardware

(GA-6a) Operating Hardware for Fenestra Office Windows shall be of bronze, light coinage finish, and packed separately.

(GA-6b) *Locking and Operating Hardware*—

NOTE: Select as required.

(1) *For open-out ventilators*—Bronze pole ring, Part 151 at head of ventilator. Bronze, cam-action handle, Part 733, attached to bracket on bottom rail by bronze bolt and friction clevis, (all handles shall be provided with notched heads to permit restricted ventilation) iron strike plate, Part 737, with brass rubbing rivet.

(2) *For open-in ventilators*—Bronze spring latch with ornamental handle, Part 734; riveted, iron, lipped strike, Part 735.

(3) Where open-in ventilator is located immediately below an open-out ventilator use combination riveted iron strike, Part 736.

(GA-7) Mastic

NOTE: Include in the Masonry Specifications that all windows shall be calked at head, jambs and sill with mastic or other calking compound, neatly applied after erection, wherever the frames meet the building construction.

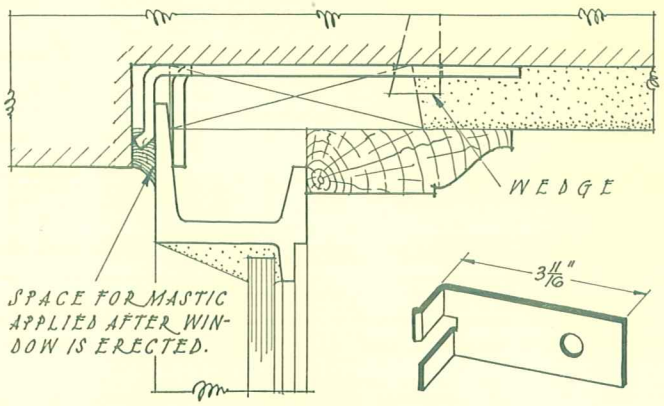
NOTE: Where window frames come in contact with Fenestra Mullions or Transom Bars, calking is to be supplied and applied by the erectors.

(GA-8) Erection

NOTE: Include in the Masonry Specifications that all masonry openings shall be accurately constructed in accordance with the standard Fenestra installation details so that windows may be erected after masonry is completed.

NOTE: Include in the Masonry Specifications that all mortar grouting, pointing, etc., shall be done by the Mason Contractor after windows have been erected.

(GA-8a) All Fenestra Office Windows shall be erected in prepared openings by the *Fenestra Construction Company*, under a separate contract.



Jamb Anchor Clip No. 822 and detail showing standard method of anchorage at the Jamb

(GA-8b) All windows shall be set plumb and true, properly aligned and securely anchored and all ventilators properly adjusted before glazing.

Standard Fenestra sill anchors shall be used under the following conditions:

(1) In all cases where a ventilator comes at the sill of the window.

(2) In all multiple unit openings where mullions are not anchored into the sills.

Standard Fenestra Jamb Anchor Clips, No. 822, to be used as necessary.

(GA-8c) Apply all hardware in accordance with the manufacturer's directions. Detached hardware shall not be installed until after glazing and painting have been completed.

(GA-9) Painting

All windows shall be given one dip-coat of gray, lead and oil paint by the manufacturer before shipment.

NOTE: The following should be provided for in the painting specifications: One additional coat of paint should be applied after erection before glazing. Further painting should be deferred until at least three weeks after glazing to allow putty to set. One or more additional coats may then be applied as required.

NOTE: Where desired, the Fenestra Construction Company at reasonable added cost will do field painting after erection. If required, so specify here, including specification for paint and its application.

(GA-10) Glass and Glazing

NOTE: The following should be included in the Glazing Specifications.

(GA-10a) *Glass*—Glass shall be (1/4" thick plate) (1/4" wire of type desired) (double strength).

NOTE: 1/4" thick glass is recommended.

(GA-10b) *Putty*—Putty shall be a high grade steel window putty.

NOTE: Ordinary wood sash putty must not be used.

(GA-10c) *Glazing*—All Fenestra Office Windows shall be glazed from the outside. All glass shall be set in a bed of putty and secured by copper plated steel, spring glazing clips, furnished by the window manufacturer. Face putty shall be applied in a neat, clean-cut, smooth manner.

NOTE: Use four to twelve glazing clips per pane depending on the size of the pane and whether it is in a fixed or movable portion of the window.

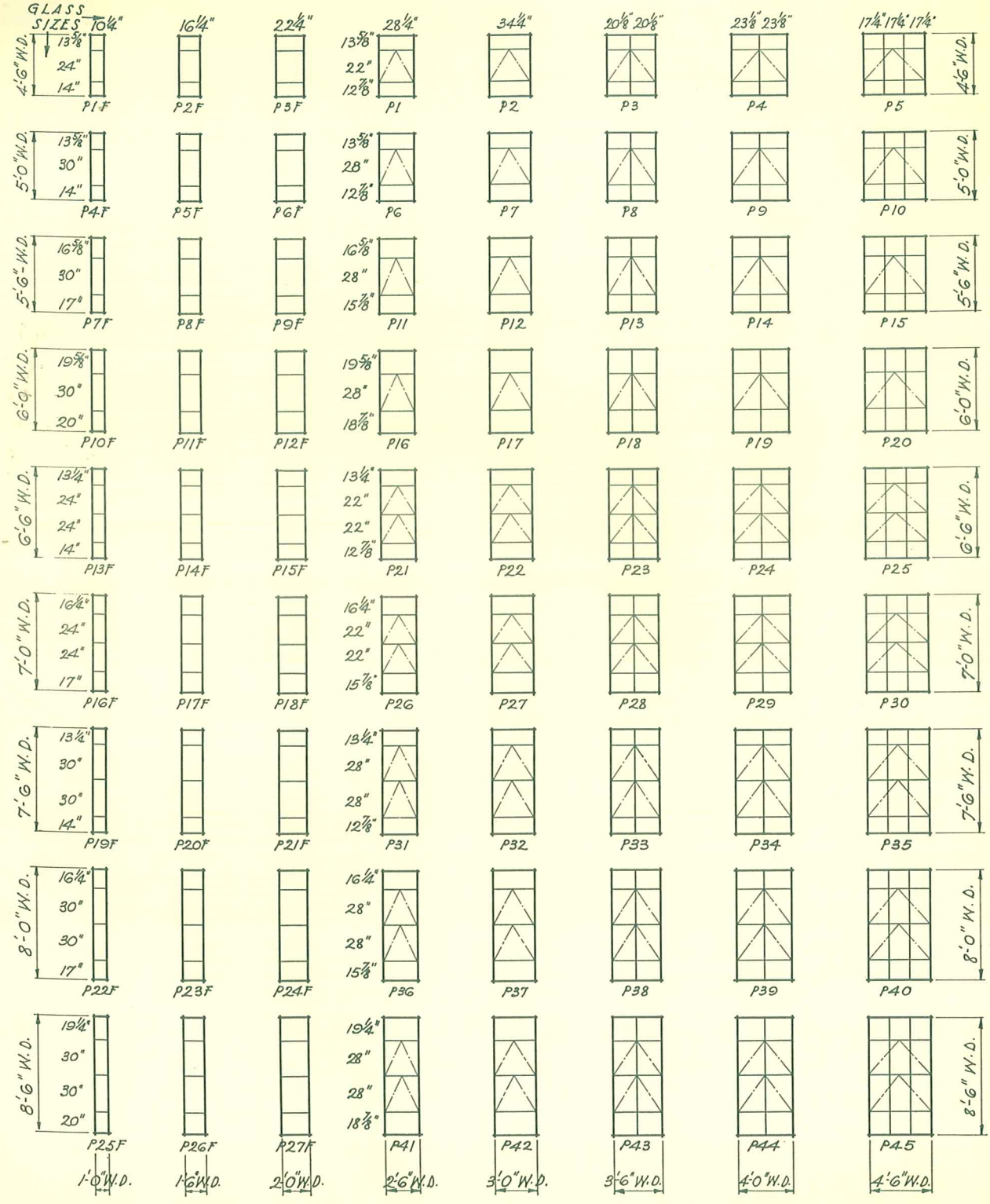
NOTE: Do not paint until putty has thoroughly hardened. See Paragraph (GA-9).

(GA-11) Shading

NOTE: All shades must be located at least 2" from the inside face of the window for hardware clearance.

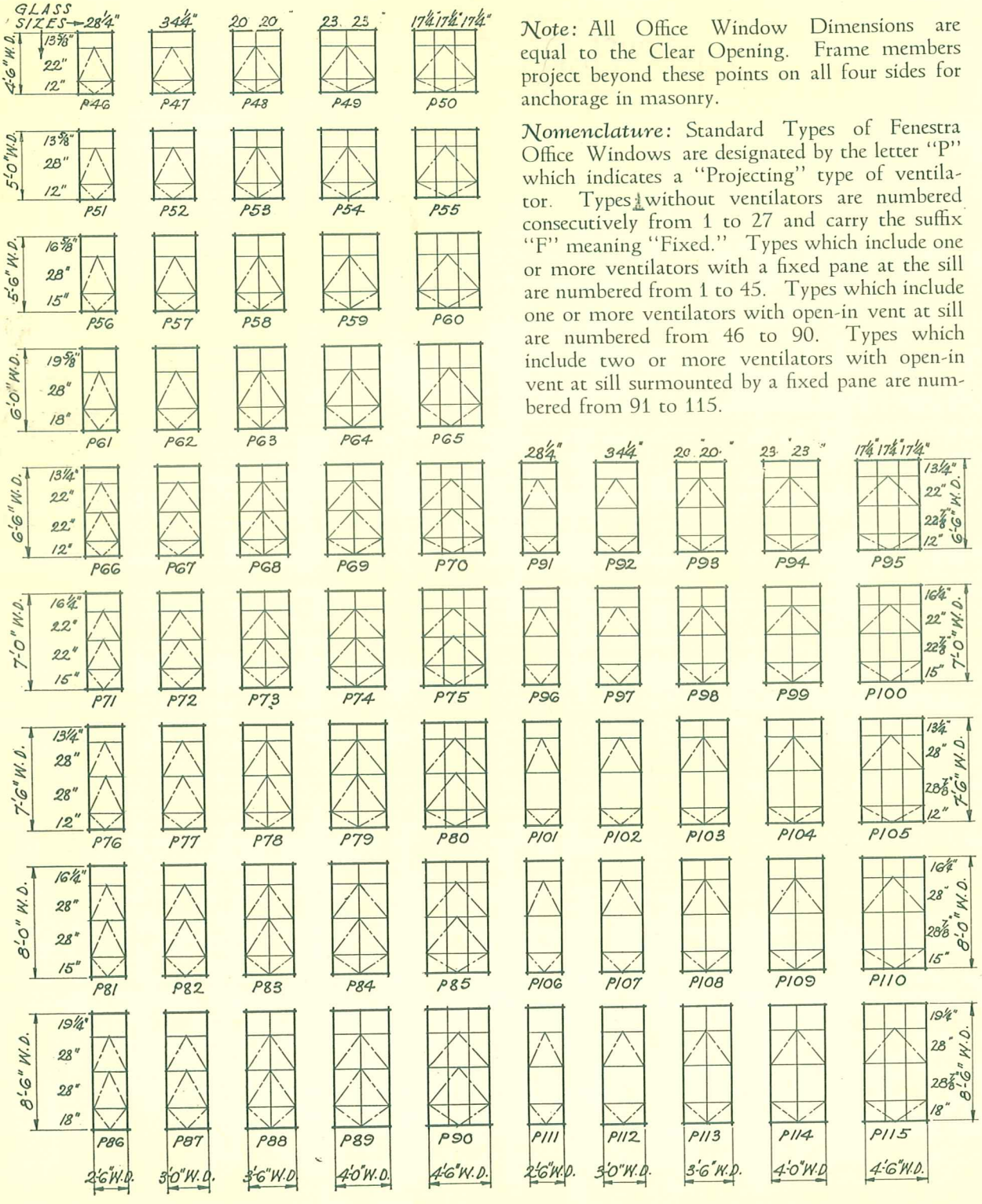
NOTE: Shade bracket clips designed to attach by drilling and tapping the top of each jamb section, are supplied at slight added cost. These clips are of sufficient depth to bring the shade bracket in the proper position and are slotted to accommodate any standard shade bracket. If shade bracket clips are required, so specify.

· STANDARD · TYPES · AND · SIZES ·



Fenestra, January 1928	Office Windows Standard Types and Sizes	Plate No G-301

· STANDARD · TYPES · AND · SIZES ·

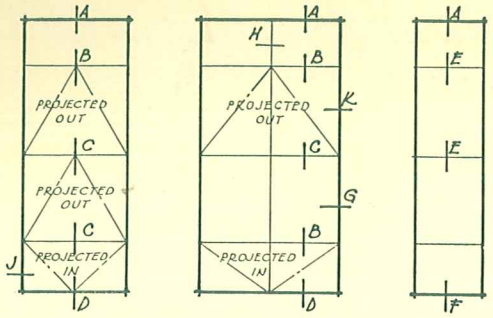


Note: All Office Window Dimensions are equal to the Clear Opening. Frame members project beyond these points on all four sides for anchorage in masonry.

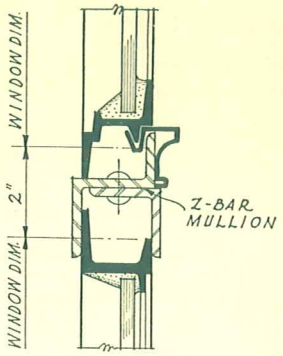
Nomenclature: Standard Types of Fenestra Office Windows are designated by the letter "P" which indicates a "Projecting" type of ventilator. Types without ventilators are numbered consecutively from 1 to 27 and carry the suffix "F" meaning "Fixed." Types which include one or more ventilators with a fixed pane at the sill are numbered from 1 to 45. Types which include one or more ventilators with open-in vent at sill are numbered from 46 to 90. Types which include two or more ventilators with open-in vent at sill surmounted by a fixed pane are numbered from 91 to 115.

Fenestra January 1928	*Office Windows* *Standard Types and Sizes*	**Plate No** G-302

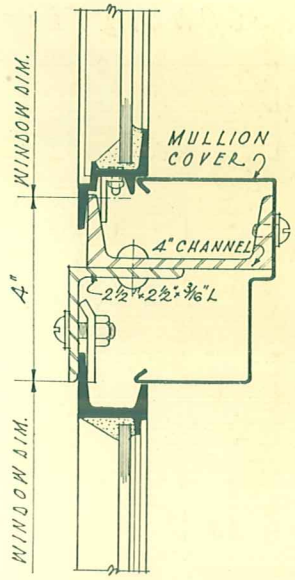
5143-B



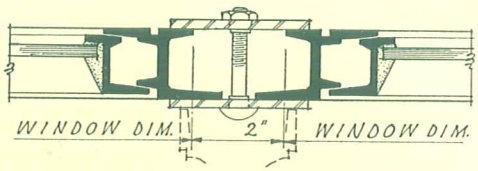
·TYPICAL·ELEVATIONS·



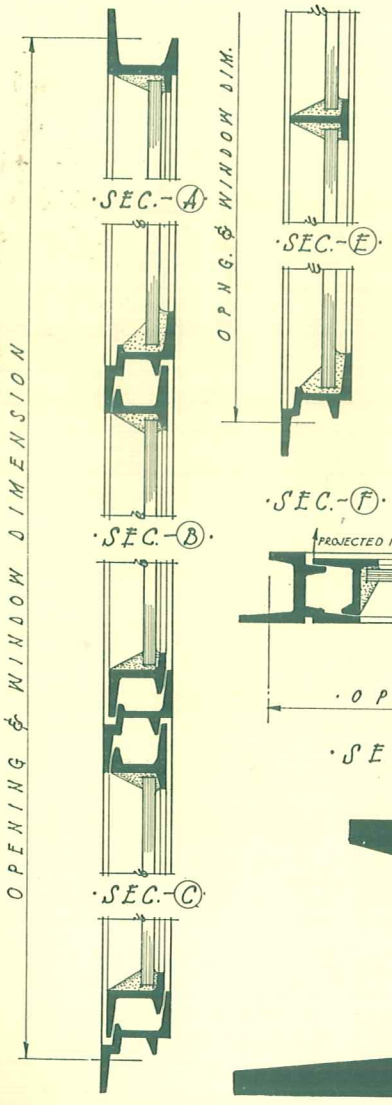
·HORIZONTAL·MULLION·
·TYPE·NO.-1·

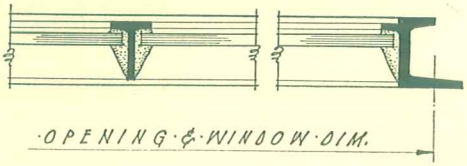


·HOR·MULLION·
·TYPE·NO.-2·

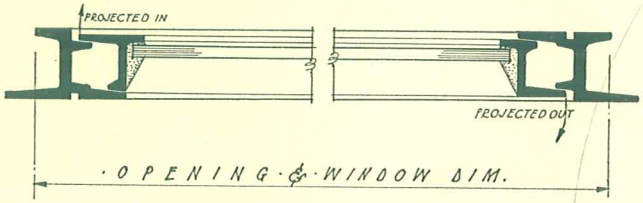


·VERTICAL·MULLION·





·SEC.-(F)· ·SEC.-(H)· ·SEC.-(G)·



·SEC.-(J)· ·SEC.-(K)·

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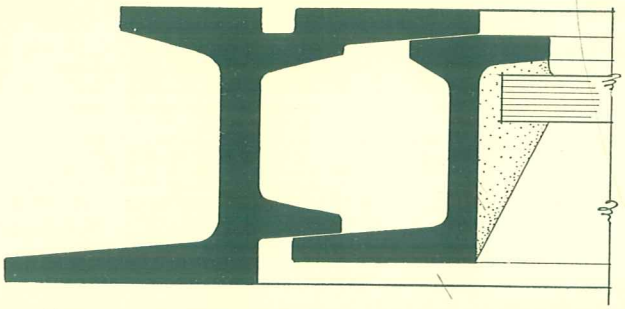
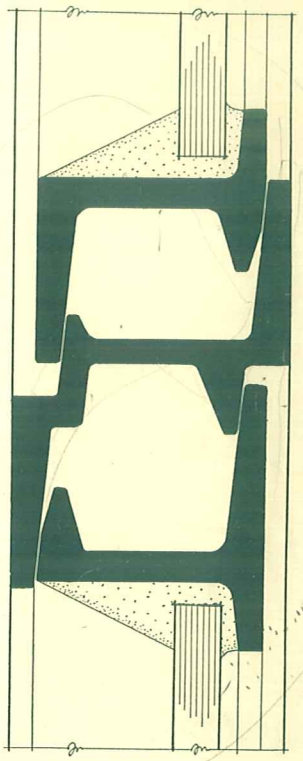


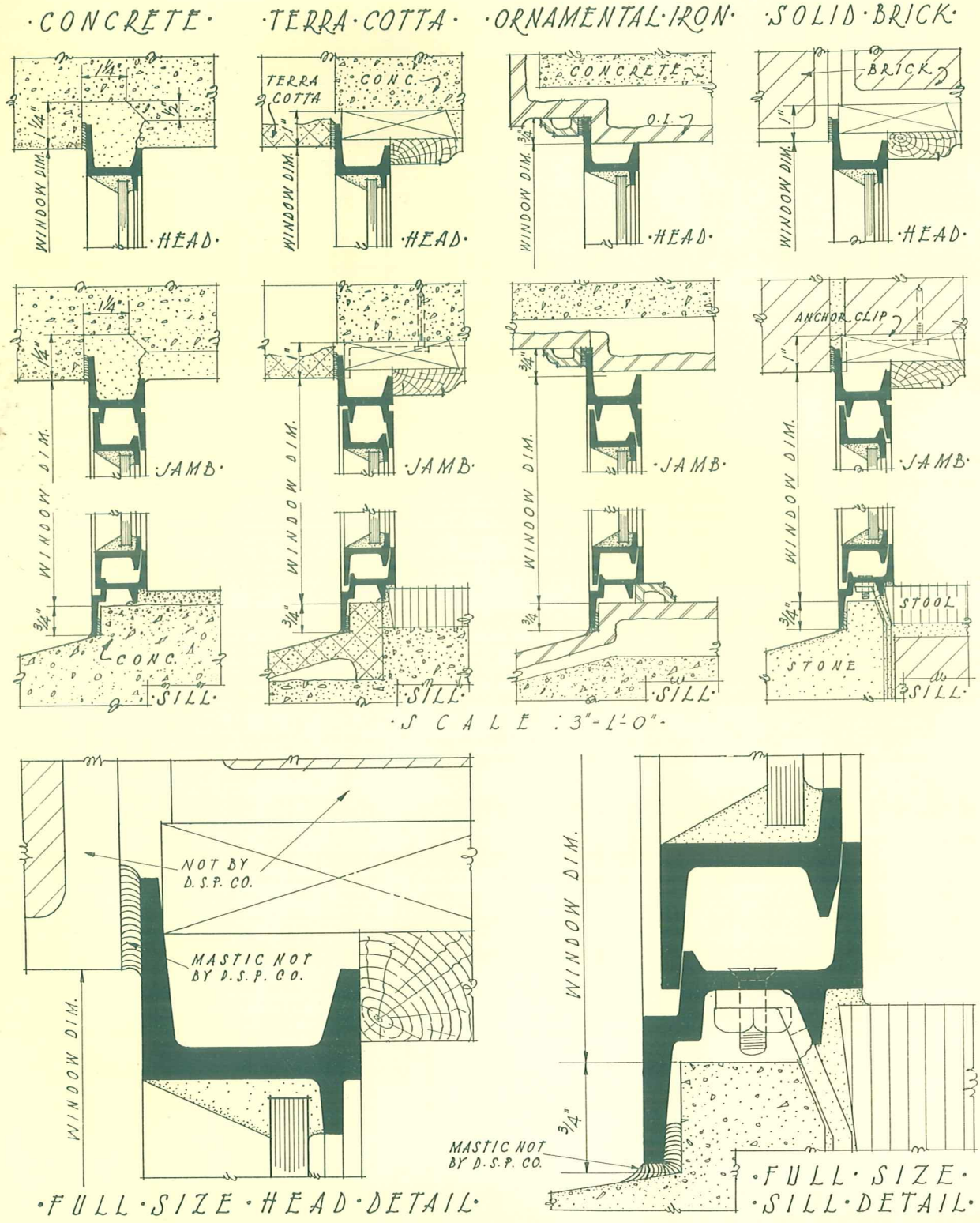
·FULL·SIZE·DETAIL·OF·JAMB·



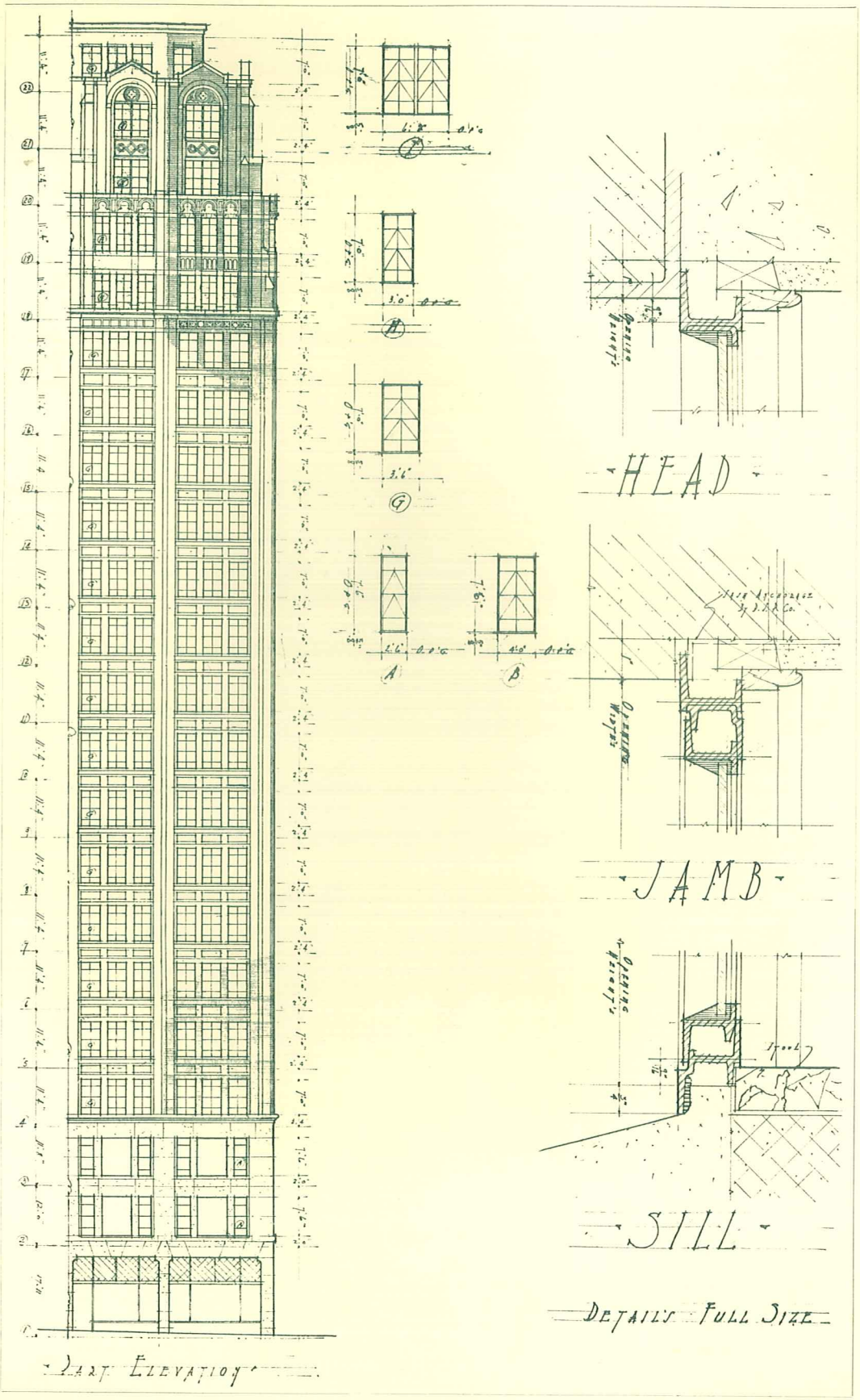
·FULL·SIZE·DETAIL·
·OF·MEETING·RAIL·

Fenestra, January 1928	Office Windows Construction Details	Plate No. G-303

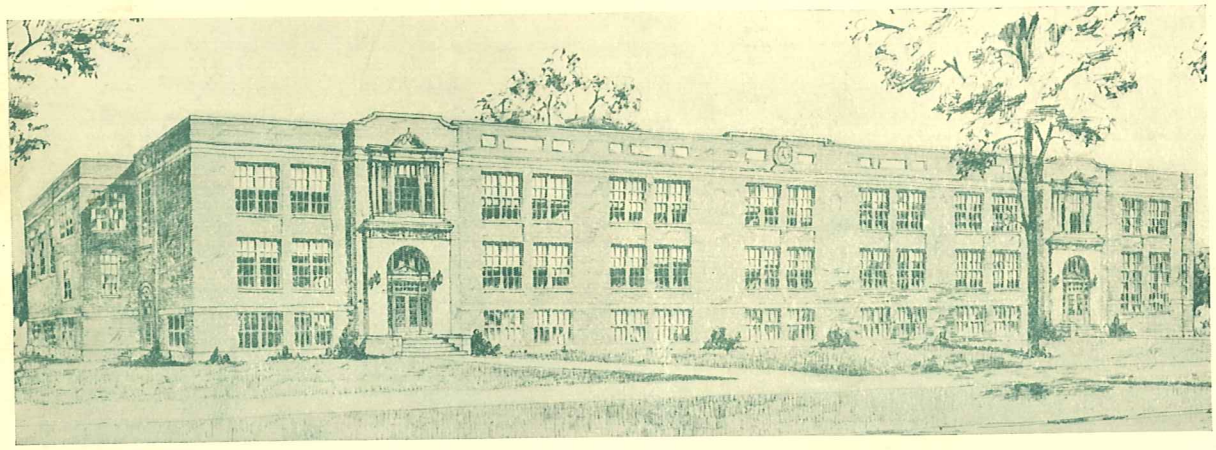
FENMARK



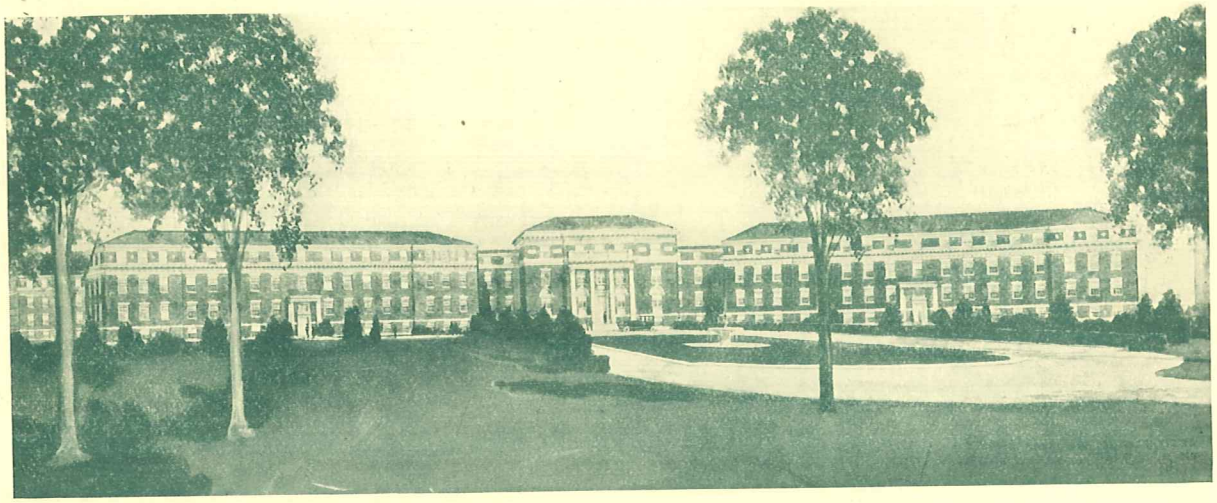
Fenestra January 1928	*Office Windows* *Installation Details*	**Plate No** G-304



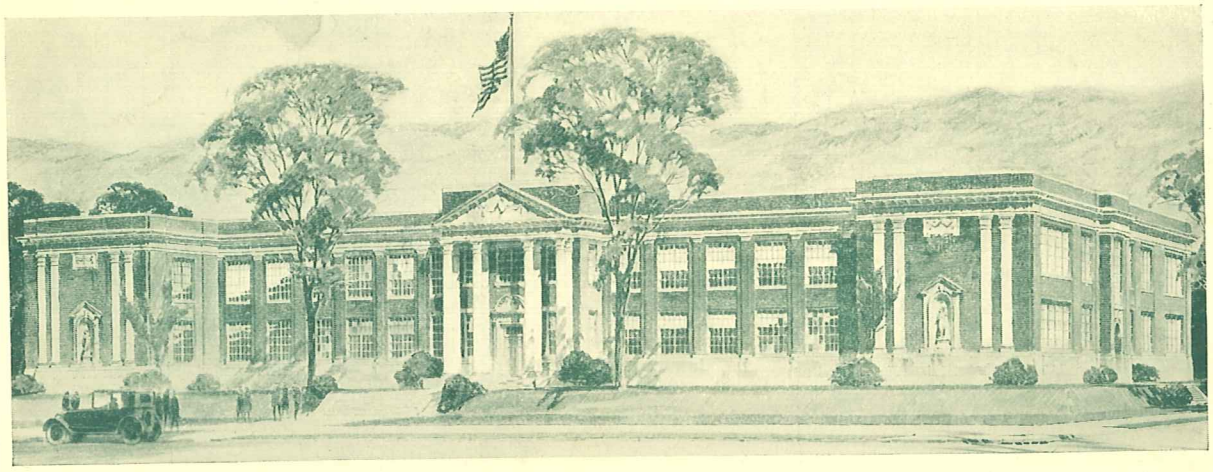
See inside front cover



Architect's sketch of the Kingsford Park Grade School, Oswego, N. Y.
Equipped with Fenestra Office Windows throughout
Architect, Gilbert L. Van Auken



Architect's sketch of the Masonic Home, Utica, N. Y.
Eight hundred units of Fenestra Office Windows
Architects, Kinne & Frank



Architect's sketch of the Canajoharie High School, Canajoharie, N. Y.
Completely equipped with Fenestra Office Windows
Architects, Kinne & Frank

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